

African first aid materials

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Injuries and sudden illnesses happen all too often. Any one of us can suddenly feel very unwell. In these kinds of situations, immediate help is usually administered by family, bystanders, work colleagues, etc. With just a basic knowledge of first aid, you too can help somebody.

However, to be of real help to a person who is injured or ill, it is important to offer the right kind of first aid. The right kind of help at the right time can improve conditions and save lives. This practice guideline describes the best and most up-to-date techniques that make the best of limited resources and that are specifically relevant for Sub-Saharan Africa. Because first aid recommendations are often linked to prevention advice, we also complemented the guideline with prevention recommendations.

All recommendations are formulated based on the latest medical and scientific data according to the evidence-based practice method. More details on the used methodology can be found at the end of the manual.

This manual outlines how you can provide first aid correctly in life-threatening situations and in the event of commonly occurring accidents. You will learn step by step what you can do to help the casualty with very little or no medical equipment. For each condition we start with a short description of the most important signs to recognize the injury or illness. Then we describe the most important actions 'What do you do?', and mention 'When to seek medical help'. Caution boxes highlight instructions to avoid further harm. Specific techniques are explained in separate boxes. All techniques and procedures are illustrated with drawings and photos.

In the text we chose the pronoun that matched the gender in the drawings, instead of writing 'he or she'. The illustrations in the manual are gender and age balanced and reflect ethnic and religious diversity.

Practice-oriented first aid training is an essential preparation for administering first aid in real emergency situations. Regular practice is necessary to keep your knowledge and skills up to the mark. This publication is not intended as a substitute for these kinds of practical lessons.

Our knowledge of first aid is continually evolving. So this publication will have to be amended on a regular basis, each time new scientific evidence is discovered.

Basic principles for management of an emergency

Dealing with an emergency

Emergency situations vary greatly but there are four main steps that always apply:

- Step 1 Make the area safe.
- Step 2 Evaluate the injured person's condition.
- Step 3 Seek help.
- Step 4 Give first aid.

Step 1 Make the area safe

Your **own safety** should always come first. As a first aider, you should:

- Try to find out what has just happened.
- Check for any danger: is there a threat from traffic, fire, electricity cables, etc.?
- Never approach the scene of an accident if you are putting yourself in danger.
- Do your best to protect both the injured person(s) and other people on the scene.
- Be aware that the property of the injured person is at risk. Theft can occur, so mind your safety.
- Seek police or emergency help if an accident scene is unsafe and you cannot offer help without danger to yourself.

In case of **road accidents**, as a first aider, you should:

- Always follow the traffic rules.
- Ask other people to warn traffic.
- Consider seeking help from the police or emergency services.
- Do not allow anybody to smoke near an accident.
- Switch off the engine of every car involved in the accident.
- Try to apply the handbrake of cars involved in the accident to prevent them from moving. You can also put something against the tyres to prevent rolling.
- Place a warning triangle at a good distance, at least 30 meters to either side of the accident, to warn traffic.
- If a warning triangle is not available, use a warning sign that is approved or permitted by the law of the country.
- Do not forget to clear the warning signs afterwards.

As a general rule, the injured person should **not be moved** from the scene of an accident. Any movement may make the injury worse if there has been a head, neck, back, leg or arm injury.

Only move an injured person if:

- The injured person is in more danger if he is left there.
- The situation cannot be made safe.
- Medical help will not arrive soon.
- You can do so without putting yourself in danger.

How to move an injured person?

There are different techniques possible for moving injured persons. Which technique is most appropriate depends on the situation.

- If the injured person is conscious, explain what you are going to do. Ask the injured person to follow your instructions.
- Try not to twist the head, neck or body. If possible, support the injured person's neck. If someone has an injured spine, movement may cause further damage.
- It's important to move the injured person quickly but try to keep the injured person's body as still as possible.
- Move the injured person to the nearest safe place or to a place where he can get help.
- Use tools that you have at hand to free an entrapped person. Be careful not to cause harm to the trapped person.

Technique Moving an ill or injured person

There are different techniques possible for moving ill or injured persons. Which technique is most appropriate depends on the situation.

If an ill or injured person must be removed quickly then use **the fastest method**, such as dragging.

- Crouch down behind the person.
 - Hold her wrists and pull backwards.
 - Or grasp the person's clothing under the arms and carefully pull backwards.
- It is best not to drag the person if she has suffered a head, neck or back injury.
- If the ill or injured person is able to hold onto you, consider carrying the person on your back.

If there are **other people** who can help, the ill or injured person can be carried away from the danger.

- The first aiders kneel on one knee on each side of the ill or injured person.
- Each first aider places his hands carefully under the person so as to support the back as much as possible.
- One first aider is at the head end and supports the head and neck.
- On command, all first aiders lift the person as evenly as possible.

Making **an improvised stretcher**:

You can use materials such as doors, planks, or ladders to improvise stretchers. The technique below explains how you can improvise a stretcher with a strong blanket and two sticks.

1. Place the stick on the blanket and fold one third of the blanket over it.
2. Place the second stick on the folded blanket at about 15 cm from the doubled edge.
3. Fold the remaining part of the blanket over the two sticks.

The weight of the injured person will keep the blanket in place. Don't use this technique for persons with injuries to head, neck or back.

Step 2 Evaluate the condition of the ill or injured person

If the area is safe, you can evaluate the ill or injured person's condition. Always check that he is conscious and breathing normally. Situations in which consciousness or breathing are impaired are often life threatening. Below we list other important situations that are life threatening or could become so if left untreated.

Related to sudden illness:

Sudden facial weakness, arm weakness or speech problems (see p. x)

Chest discomfort (see p. x)

Not being able to stand or sit up (see chapter 'Fever' p. x)

Great sleepiness, confusion (see chapters 'Fever' p. x, 'Diarrhoea' p. x and 'Rash' p. x)

Not being able to drink, vomiting everything, diarrhoea, dehydration (see chapters 'Fever' p. x, 'Diarrhoea' p. x and 'Rash' p. x)

Spontaneous bleeding (see chapters and 'Fever' p. x and 'Rash' p. x)

Fits (see p. x)

Related to injuries:

Severe bleeding (see p. x)

Wounds with bullets or objects in a cut (see p. x)

Severe burns (see p. x)

Snake bite (see p. x)

Injuries to head, neck or back (see p. x)

Broken limbs (see p. x)

Allergic reaction to bee or wasp stings (see p. x)

Poisoning (see p. x)

Caution

Bleeding can also occur inside the body. Although the blood loss is unseen, this is a life threatening situation. This can happen after a road accident or a fall (see chapter 'Severe bleeding' p. x).

Step 3 Seek help

- Once you have evaluated the ill or injured person's condition you can decide if help is needed urgently.
- An ambulance is the best way to transport ill or injured persons. If an ambulance can be obtained in a short time, it is best to call and wait.
- In case of road accidents, you should also consider seeking police help.

Other types of transport can be used if no ambulance is available. See the box on transportation.

Step 4 Give first aid

Introduce yourself and explain what you are going to do. This will give the ill or injured person greater confidence in you. Always ask a person that is conscious or his family if you may help him. Try to give first aid to the person in a calm and controlled manner. We explain the exact procedures to follow in the chapters to come. Give priority to any life threatening conditions. First aid for minor conditions comes next.

When there are multiple ill or injured persons:

- give priority to persons in a life threatening situation;
- leave persons that only have minor injuries;
- leave persons that are dead.

Caution

Using alcohol for pain relief can be dangerous and should be avoided.

Transportation

- Move the ill or injured person with great care to the available means of transport. While en route:
- Drive carefully for the comfort of the person and for the safety of all.
- Try to keep the breathing passage open of persons that are unconscious. (see chapter 'Fainting or unconsciousness' p. x).
- Try to support the neck and try not to twist the head, neck or body of persons with head, neck or back injury (see chapter 'Injury to head, neck, or back' p. x).
- Ask bystanders to drive so that you can help the ill or injured person.
- Consider where to find the nearest facility that can provide help.
- If possible, encourage family or loved ones to accompany the ill or injured person.
- Try to protect the person from cold and heat.

If you need to get the ill or injured person [into the car](#).

- Move the passenger seat as far back as possible and recline the seat backwards.
- Slide the person carefully in the car.
- Use the recovery position for persons that are unconscious (see 'Technique: Recovery position' p. x).
- Stay with him until you reach medical help. Give first aid in accordance with the following chapters.

If there is [no medical care](#) in your area, plan ahead for transporting ill or injured persons:

- Make a list of numbers to call in case of an emergency.
- Make agreements with professional or private drivers.
- Motorcycles and bicycles can be made into ambulances too.
- Agree on signs to place on the road when someone needs emergency transport.

The community can set up a fund to pay for transport and care in case of emergencies.

Stress in an emergency

It is only normal to feel stress if you are suddenly faced with the need to give first aid in a real emergency. Try to bring your emotions under control before you proceed. Take a moment of your time to stand back from the situation and regain your calm. Do not set about the task too hastily and do not under any circumstances place your own safety at risk.

It is not always easy to process a traumatic event emotionally. It is not unusual for first aiders to experience difficulty when working through their emotions afterwards. Talk to your friends, family, fellow first aiders or religious leader. If you are still worried, talk to a professional and seek counselling.

Protecting from infection

When dealing with ill or injured persons it is important to keep the risk of infection between yourself and the ill or injured person to a minimum.

- If possible, wash your hands with soap and water before and after you take care of an ill or injured person. Alternatively you can also use ash to wash your hands.
 - Avoid direct contact with blood or body fluid.
 - Always have gloves within reach, if you can. Wear shoes to protect your feet from infection.
 - Use lots of clean water to rinse out any blood or other body fluid that splashes into your eyes or mouth, straight away.
 - Dispose any soiled bandages carefully. Put it in a plastic bag or bin and then burn or bury it.
 - Throw away used materials and clean up any blood spills because it can cause infection to others.
 - Be very careful with sharp objects. They should be thrown away with care (e.g. in a box) so that they form no danger to others.
 - Use clean drinking water or boiled and cooled water if a person needs to drink.
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- Use rubber gloves if there is blood or other body fluids like urine or vomit.
 - You can also use a clean plastic bag. If no gloves or plastic bags are available you can also direct the ill or injured person what he can do himself.
 - Use a sticking plaster, bandage or clean cloth to protect any cuts, grazes, or wounds you may have yourself. Infections may spread through breaks in your skin.

Caution

- If no gloves or plastic bag are available be very careful to avoid contact with blood. If you cannot ensure that, you can decide not to give help.
- Be careful with dirty or contaminated materials to treat ill or injured persons as they can pass on diseases from one person to another. You can sterilize material by placing it 10 minutes in boiling water or running it through a flame a few times.

Technique Washing hands

1. Wet your hands under running water.
2. Use soap. If you have liquid soap, this is best. Alternatively you can also use ash that is no longer hot to wash your hands.
3. Rub your hands firmly together and wash your hands thoroughly. Make sure the soap touches all the parts of your hand. Do not forget the tips of your fingers, your thumbs and the skin between your fingers.
4. Rinse your hands well. Use plenty of water.
5. Dry your hands.

Important

Seek medical help if you have been accidentally exposed to blood or body fluids. Certain medication may reduce your risk of infection.

Basic needs

Helping with stress

- Tell the ill or injured person your name and explain how you will help him. This will help to relax him.
- Listen to the person and show concern and kindness.
- Make him as comfortable as possible.
- If he is worried, tell him that it is normal to be afraid.
- If it is safe to do so, encourage family and loved ones to stay with him.
- Explain to the ill or injured person what has happened and what is going to happen.

Helping in case of cold or heat

Try to protect an ill or injured person from cold and heat.

- For cold: do not expose the person and use a blanket, coat or clothing to cover him.
- If the ill or injured person is outside in the sun, make a sunshade using an umbrella, blanket or a jacket. If this is not possible, use your own shadow to protect the ill or injured person.

Food or drink for injured persons

It is better not to give anything to eat or drink to a person that is:

- severely injured;
- feeling nauseous;
- becoming sleepy or falling unconscious.

This may create complications when the person needs an operation. This does not apply to fever, malaria, pneumonia, diarrhoea or rash. See the corresponding chapters

Facial weakness, arm weakness and speech problems

If a person suddenly has facial weakness, arm weakness or speech problems she might have had a stroke. This is a life-threatening situation. A stroke occurs when blood cannot reach a part of the brain. When a person suffers a stroke she can have difficulties doing certain actions.

If you think that someone is having a stroke you should ask the ill person to perform 3 simple actions and check for the following signs:

- Ask the ill person to smile or show you her teeth. Check whether her mouth is crooked or drooping at one corner.
- Ask the ill person to lift both arms. Check whether she can do this without one arm dropping or drifting. A stroke often causes one side of the body to become weak or even paralysed.
- Ask the ill person to repeat a simple sentence after you. Check whether she can speak clearly or if she has problems saying the words.

A stroke is very likely if the ill person has difficulties with any of these actions.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the ill person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The ill person urgently needs help. Shout or call for help if you are alone but do not leave the ill person.
2. If the person can sit up then make her sit upright. This helps the ill person to breathe.
 - If the ill person can't sit, place her in the recovery position (see 'Technique: Recovery position' p. x).
3. Comfort the ill person and explain what is happening to her. Tell the ill person to relax and rest. She should not try to do anything.
4. Arrange urgent transport to medical care yourself if you are alone.
5. Keep checking that the ill person is awake and breathing properly. In case the person becomes unconscious or is not breathing see chapter 'Fainting or unconsciousness' p. x or 'No breathing' p. x.
6. Once actions to obtain help have been made, stay with the ill person until medical help is available.

Caution

Do not give food or drink to an ill person having a stroke. A person with a stroke is at risk of choking or vomiting.

Chest discomfort

If someone complains of chest discomfort, it may be a sign that not enough blood is going to the heart. This is very serious and can lead to a heart attack. It is serious even when an ill person says that nothing is wrong.

Suspect a heart attack if someone has the following symptoms:

- discomfort, pain, or tightness in the chest;
- pain spreading to shoulder, neck, jaw, arm or stomach;
- dizziness and fainting;
- sweating, difficulty breathing normally, nausea or vomiting.

These symptoms do not always happen all at once: they can happen very slowly.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the ill person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The ill person urgently needs help. Shout or call for help if you are alone but do not leave the ill person.
2. Make the ill person comfortable. Make him rest and ask him not to move. Comfort the ill person and tell him what is happening.
3. Ask the person if he is taking medication and has taken it according to prescription. Do not delay getting formal medical attention.
4. If you have an aspirin, make the ill person chew an aspirin and swallow it with water afterwards. Tell him that this will help to get blood to the heart. Only give aspirin if the legislation in your country allows you to do this.
5. Arrange urgent transport to medical care yourself if you are alone.
6. Keep checking that the ill person is conscious and breathing properly. In case the person becomes unconscious or is not breathing see chapter 'Fainting or unconsciousness' p. x or 'No breathing' p. x.
7. Once actions to obtain help have been made, stay with the ill person until medical help is available.

Choking

Infants and children often choke on swallowing foreign objects such as coins and small toys. Most adult cases of choking occur while eating. Since choking often occurs while eating there are usually people present. This means there is a good chance that someone will be able to give help quickly.

Someone may be choking if:

- they try to cough something up but it does not help;
- they cannot speak or make any sound;
- they put their hands on their throat;
- their lips and tongue turn blue;
- you can see the veins in their face and neck sticking out;
- the person becomes dizzy and then falls unconscious.

What do you do?

Ask the ill person: "Are you choking?"

If the ill person **can answer, cough or breathe**, then:

1. Ask the ill person to keep coughing.
2. Do not do anything else.
3. Stay with the ill person until he breathes normally again.

If the ill person **cannot speak, cough or breathe**:

1. You give 5 blows to the back, between the shoulder blades (see 'Technique: Back blows' p. x).
2. After each blow, you check if the object is still stuck in the breathing passage. Check by making eye contact after each blow. If the breathing passage is free (this means the ill person can speak, cough or breathe again), stop giving blows to the back.
3. If the object is still stuck you give 5 thrusts to the abdomen (see 'Technique: Abdominal thrusts' p. x). If the breathing passage is free, stop giving abdominal thrusts.
4. If the ill person is still choking, you switch between 5 blows on the back and 5 abdominal thrusts.
5. If the ill person loses consciousness, you carefully place him on the ground.
6. Ask a bystander to seek help or to arrange for bringing the ill person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The ill person urgently needs help. Do this yourself if you are alone.
7. You give 30 chest compressions and 2 rescue breaths (see chapter 'No breathing' p. x).
8. Continue compressions and rescue breaths until medical help takes over or the ill person starts breathing normally or you become exhausted.

Caution

Don't lose time. If the ill person's chest does not rise during the first rescue breath do the following before attempting the second rescue breath:

- Check the ill person's mouth. Remove anything that obstructs the breathing passage.
- Check that his head is tilted far enough back and that his chin is properly lifted.
- Do not attempt more than two breaths each time before returning to the chest compressions.

Technique Back blows

- Stand to the side of and a little behind the ill person.
- Support the ill person's chest with one hand and bend him well forward. In this way the object will come out if dislodged and not move deeper down the windpipe.
- Give up to 5 firm blows between the ill person's shoulder blades. Use the heel of your free hand. Each blow should be intended to dislodge the object.
- For a baby under 1 year old: lay the baby along your forearm and give up to 5 firm blows on the baby's back.

Technique Abdominal thrusts

- Stand behind the ill person and wrap both arms around him.
- Make a fist and place it between the navel and the lower tip of the breastbone.
- Hold onto this fist with your other hand.
- Bend the ill person forward and pull your fist strongly towards you and upwards. This method can be used for anyone older than 1.
- For a baby under 1 year old, give chest thrusts. To do this, put two fingers in the middle of the chest and push sharply inwards and upwards towards the head.

Caution

Abdominal thrusts can cause serious internal damage. Persons who have been given abdominal thrusts should be referred to a doctor.

Prevention of choking

To prevent yourself or somebody else from choking:

- Take small bites and chew food thoroughly.
- Teach children not to talk or laugh or cry with food in the mouth.
- Do not lie down, walk, run or jump while eating.
- Watch babies and prevent small children from putting small objects in their mouth, like nuts, sweets, fish bones or small toys. They can choke on anything that fits into their mouth. Children under the age of 3 are at most risk because they explore the environment by putting objects in their mouth. They should therefore have no access to any object or food particle smaller than 3 cm.
- Do not give liquids to a child that is lying down.

Fainting or unconsciousness

A person has lost consciousness if he does not react to your actions by opening his eyes or answering. Loss of consciousness causes the muscles to relax and this means that the tongue is also loose and can block the breathing passage by falling backwards in the throat.

In fainting, the loss of consciousness is usually brief. Fainting can be caused by many reasons such as emotional distress, tiredness, hunger, standing up for long times, a sudden change in body position, being a long time in hot environmental temperatures or specific medical conditions. Pregnant women, children and elderly can be more vulnerable to these causes.

Unconsciousness is a more serious type of loss of consciousness. Causes include head injury, heart arrest, stroke, or poisoning.

What do you do?

- Talk loudly to the ill person. Tap him on the shoulders and ask if he is okay. Do not shake the person roughly as this may make his injuries worse.

If the ill person **responds**, then:

1. Do not try to change the position of the ill person's body. If there has been a head, neck, back, leg or arm injury, any movement may make the injury worse. Do not move him away from the scene unless he is in danger.
2. Try to find out what is wrong with the ill person.
3. Find medical help for the ill person if this is needed.
4. Keep checking the ill person to make sure that he is not getting worse.

If the ill person **does not respond**, then:

1. Shout for help. Do not leave the ill person if you are alone. Ask a bystander to seek help or to arrange for bringing the person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The person urgently needs help.
 2. You must unblock the breathing passage:
 - Gently roll the ill person over on to his back.
 - Carefully tilt the head back and lift the chin up with your hand on the bony part of the chin.
 - Do not put your hand on the soft part under the chin to do this.
 - This simple action lifts the tongue from the back of the throat.
 3. The ill person's airway must be kept open while you check for breathing:
 - Check that the ill person's chest is going up and down.
 - Put your ear to the ill person's mouth to listen for breathing.
 - Put your cheek close to the mouth to feel for breathing.
- Do not spend more than 10 seconds looking, listening and feeling for an ill person's breathing.

If the ill person is **not breathing**:

You give first aid as in chapter 'No breathing' p. x.

If the ill person is **breathing normally** but does **not react**:

1. You should roll the ill person into the recovery position and find emergency medical help. (see 'Technique: Recovery position' p. x).
2. Once actions to obtain help have been made, stay with the ill person until medical help is available.
3. Keep checking that the ill person is breathing without difficulty.

Caution

In the first few minutes after a heart arrest it often appears as if the ill person is trying to breathe. It can appear as if the casualty is barely breathing or is taking infrequent noisy gasps. In fact, they are the last 'gasps' of a body in the throes of death. You should not confuse this with normal breathing. If you are not sure if the ill person is breathing normally then you do the same as for a person who has stopped breathing. Keep checking that the ill person is breathing without difficulty.

Unblocking the breathing passage takes priority over concerns about a potential spinal injury. Unless you can clearly see that the person is breathing normally an unconscious person must be turned onto his back to unblock the breathing passage and to check breathing.

When a person needs to be put in the recovery position, keeping the airways open takes priority over potential spinal injury. If possible, support the person's neck while turning him into the recovery position.

Technique Recovery position

If a person is unconscious and breathing normally turn him in the recovery position. Make sure his head is tilted back and his mouth is angled to the ground. This will keep his breathing passage open. It will also prevent vomit from entering his lungs.

1. Remove the ill person's spectacles if necessary.
2. Kneel down beside the injured person. Make sure that both his legs are outstretched.
3. Place the ill person's arm (on your side) at right angles to his body. Bend the forearm upwards with the palm facing up.
4. Lay the other arm across his chest. Hold the back of the ill person's hand against his cheek (on your side). Keep his hand in place.
5. With your free hand grasp the leg on the other side of his body by the knee. Raise his leg, but leave his foot on the ground.
6. Pull the raised leg towards you. In the mean time, keep holding the back of his hand against his cheek. Roll the ill person towards you to bring him on to his side.
7. Position the upper leg in such a way that hip and knee are at right angles.
8. Tilt the head back to keep the airway open.
9. Make sure his mouth is angled to the ground. This will prevent him choking on blood or vomit.
10. Adjust his hand under the cheek if needs be, to keep the head tilted.
11. Keep checking his breathing.

The same technique can be used to put an infant or child in the recovery position. If needs be you can place a small pillow or rolled up blanket behind the infant's back. This will keep the infant more stable. It is better to turn a pregnant injured woman onto her left side when placing her in the recovery position.

Prevention of fainting or unconsciousness

Unconsciousness can be caused by head injury, heart attack, stroke, poisoning, overdose, airway obstruction and fits, among other things. See prevention 'Choking' p. x, prevention 'Fits' p. x, prevention 'Injury to head, neck or back' p. x and prevention 'Poisoning' p. x

Fainting is a brief loss of consciousness, which happens if there is not enough blood going to your brain. It is a temporary condition from which you recover quickly. It can be caused by emotional distress, tiredness, hunger, standing up for long periods, a sudden change in body position, being in a hot environment for long periods or specific medical conditions. Pregnant women, children and the elderly are more vulnerable to these causes.

The following symptoms may occur right before fainting: light-headedness, dizziness, sweating and cold skin, seeing black spots, and a lack of colour in the face in fair-skinned people.

To prevent fainting

- Avoid stress, tiredness and hunger
- Do not stand up quickly from a lying or sitting position
- Avoid standing for long periods
- Drink more water and try to avoid physical exertion in case of being in a hot environment for long periods of time.

If you feel as if you are going to faint, you can prevent it by:

- drinking 2 glasses or cups of water, because this can help you rehydrate. Caution: do not force someone who feels faint to drink water.
- performing one of the following postures:
 - lying down
 - standing with crossed legs, preferably in combination with tensing your leg muscles, by tiptoeing or stretching the legs
 - squatting
 - sitting on a bed side with the head bent between the knees
 - tensing your leg muscles by tiptoeing or stretching the legs

These postures make your blood pressure rise, which can prevent you from fainting.

If you feel faint again after squatting, try to tense the muscles of your legs and belly. Get up slowly after squatting or sitting.

No breathing

A person can only survive a few minutes without breathing and a beating heart. If you find an ill person who is not breathing, you can increase his chances to stay alive by pushing hard and fast in the middle of the ill person's chest and giving rescue breaths.

What do you do?

If there is **no reaction** from the ill person and he is **not breathing normally**, you should:

1. Ask a bystander to seek help or to arrange for bringing the ill person to a medical care provider. The ill person urgently needs help. Do this yourself if you are alone. Place the ill person on a firm surface.
2. Start pushing down hard and fast in the centre of the chest: do this 30 times without stopping. (See 'Technique: Chest compressions' p. x)
3. Give 2 rescue breaths. This means breathing into the ill person's mouth. (See 'Technique: Rescue breaths' p. x).

Caution

If for some reason you cannot or do not want to give rescue breaths you can just continue to push down on the chest.

- Check that the chest goes up and then goes down again.
- Breathe in again and then blow into the ill person's mouth a second time.

4. Push down 30 times hard and fast on the chest again.
 5. Give 2 rescue breaths again.
 6. Do not interrupt resuscitation until:
 - professional help arrives and takes over; or
 - the victim starts to wake up: to move, opens eyes and to breathe normally; or
 - you become exhausted.
- For a baby, place the baby on a firm surface. Only use two fingers to push down on the chest, otherwise you might hurt it more.
 - For a child, place the child on a firm surface. Use one or two hands depending on the size of the child and your own strength.
 - For babies and children, you should push the breastbone for at least one third of the depth of the chest.
 - It takes less air to give rescue breaths to babies or children. Check that the chest rises. If it rises, then you have blown enough air in.

In case of **drowning**:

- Remove the injured person rapidly and safely from the water, but do not place yourself in danger. Try to throw a rope or something that floats to hold onto to injured persons that are conscious.
- Do not try to remove water from the lungs.
- Start chest compressions and rescue breaths immediately.
- Cover the injured person with a coat or a blanket to keep warm.

Technique Chest compressions

- Place the ill person on a firm surface.
- Kneel down beside the ill person.
- Place the heel of one hand in the centre of the ill person's chest.
- Place the heel of the other hand on top of your first hand.
- Lock your fingers together. Do not apply pressure to the ill person's ribs. Nor should you press the upper part of the stomach or bottom end of the breastbone.
- Make sure your shoulders are directly above the ill person's chest. With outstretched arms, push 5 cm (max. 6 cm) directly downwards.
- Each time you press down allow the chest to rise fully again. This will let blood flow back to the heart.

Do not allow your hands to shift or come away from the breastbone.

- Compression and release should be of equal length.
- Give 30 chest compressions in this way at a rate of 100 compressions a minute (you may go faster, but not more than 120 compressions a minute). This equates to just under 2 compressions a second.

Technique Rescue breaths

- Put one hand on the ill person's forehead and tilt back his head.
- Put your other hand on the bony part of the chin and lift his chin.
- Then pinch the ill person's nose with the hand that is on his forehead and take a normal breath.
- Put your mouth completely over the ill person's mouth so that it is sealed with your lips.
- Calmly blow your air into the mouth for 1 second.

If the person's chest does not rise after the first ventilation, carry out the following steps before you begin the second ventilation:

1. Check to see whether there is anything in the person's mouth.
2. Remove any visible items that are blocking or may block the airway.
3. Check that the head is well tilted and the chin is lifted properly. Make no more than two attempts at ventilation each time before switching to chest compressions.

If there are a few trained rescuers present, it is best to alternate with each other during resuscitation. Chest compressions are tiring to administer. The quality of the chest compressions often deteriorates after a few minutes. The rescuer does not always realise this. To ensure the quality of chest compressions, the rescuers should switch every two minutes. The switch should preferably be made after giving two ventilations.

- The first rescuer resuscitates for two minutes (chest compressions and ventilations).
- Another rescuer takes over and resuscitates for a further two minutes (chest compressions and ventilations). Then switch again.
- The switch should happen with minimal interruption, and as quickly as possible.

Prevention of no breathing

A breathing arrest can be caused by drowning, suffocation, poisoning or overdose, stroke, heart attack, head injury, and choking, among other things. See prevention 'Choking' p. x, prevention 'Injury to head, neck or back' p. x and prevention 'Poisoning' p. x.

To prevent a person from drowning

- Be careful near a river, pond, lake, sea or swimming pool; keep a close watch on children in the neighbourhood of water.
Be careful in rivers or the sea because the water can be fast-flowing.
- Do not leave small children alone near water. They can also drown in small amounts of water, such as washing tubs, water wells, irrigation ditches or animal drinking troughs.
- Fill in unused ditches and water holes near your home.
- In case of used water reservoirs, you can make a fence around it. A fence can be made of branches, sticks, wood blocks or whatever is available.
- If available, use a flotation device for children and anyone who cannot swim. However, continue to pay attention to people wearing a flotation device as an accident can still occur. Those able to swim should also use a flotation device when going into deep or fast-flowing water, even if they are in a boat.

To prevent yourself or somebody else from suffocation

- Ventilate dwellings when heating or cooking with wood or charcoal, since it produces a lot of smoke that can result in too little oxygen in the air and in gas suffocation while sleeping. If possible, let children sleep in a separate room without any smoke.
- Do not let children play with plastic bags, or the cords of clothing/curtains.
- Remove toys, pillows, loose bedding or any other moveable objects where children are sleeping.
- Babies should be placed on their back for sleeping to prevent them re-breathing carbon dioxide from exhaled air.

Fever

A fever can be a sign of serious illness. Any person with fever needs medical attention to determine the cause. Fevers caused by malaria* or pneumonia* can be very dangerous if they are left untreated and can lead to death.

- Malaria is a disease that is spread by mosquitos. An ill person with fever who lives in, or has visited, a malaria region may have malaria.
- Pneumonia is an infection of the lungs.

What do you do?

1. Wash your hands before taking care of an ill person. Use soap to wash your hands or alternatively you can also use ash.
2. Find out how high the ill person's temperature is:
 - Use a thermometer in the armpit, if available. The ill person has a fever if his temperature is higher than 37,5°C.
 - If you do not have a thermometer, and the person feels hot to touch, it is probably a fever.
3. Seek medical help to find out the cause of the fever.
4. Someone with fever needs to rest and drink lots of fluids to stop dehydration:
 - Give the ill person more to drink if the colour of urine is dark and the ill person does not urinate often.
 - Breast-fed babies: continue to breast-feed but more frequently than usual.
 - Bottle-fed babies: continue with normal feeds and give extra rehydration drinks.
5. Think about how the ill person is dressed. Dressing too warm can increase the fever, dressing too lightly can cause shivering which will deplete the body energy.
6. Use lukewarm water to sponge the ill person unless it upset him or causes shivering. Do not use cold water as this can make the body react by heating up more.
7. If an ill person is suffering, give an anti-fever medication if allowed in your country.
8. If the ill person has a fit (he suddenly shakes fast and uncontrollably), give first aid for fits (see chapter 'Fits' p. x).
9. Wash your hands after taking care of an ill person. Use soap to wash your hands or alternatively you can also use ash.
10. Keep checking the ill person day and night: get up two or three times in the night to check.

When to seek medical help

Fever can be a sign of serious illness. Any person with fever needs medical attention to determine the cause. Medical attention is especially important for babies, children and pregnant women.

Seek emergency medical help if the ill person:

- cannot take medication;
- has fits;
- is very sleepy, difficult to wake up, or confused;
- has a headache;
- keeps vomiting;
- cannot drink, urinates less and the colour of the urine darkens, sunken eyes, an ill child cries without tears, mouth is dry;
- cannot stand up or sit up;
- is a baby and is too weak to be carried;
- has fast breathing:
 - child up to 12 months: more than 50 breaths/minute.
 - child more than 12 months: more than 40 breaths/minute.
- has difficulty breathing, such as the chest heaving, nostrils flaring or chest indrawing;
- has a whistling noise when breathing;
- is bleeding spontaneously.

If an ill person must travel for help, keep giving him sips of drink on the way there.

Caution

- Only give anti-fever medication if the legislation in your country allows you to do this.
- Anti-fever medication and herbal remedies may bring relief, but do not treat the cause of the illness.
- Keep the person away from any smoke, including cooking fires and cigarettes.

Important

When medication is prescribed:

The ill person must finish the whole course of medicine. If it is not finished, then the person is not cured and the disease may come back.

- There is an exact amount of medicine to give according to the ill person's age and weight. You must stick to this dosage.
- When giving medicine to an ill child, make sure he is calm. An ill child who is crying will not swallow the medicine.
- If an ill person vomits less than 30 minutes after taking the medicine, give the medicine again. Avoid purchasing substandard medication or using medicines that
 - have past their expiry date;
 - have been exposed to direct sunlight;

Prevention of fever

Fever can be the result of pneumonia, malaria or another infection. The following infections can be prevented by getting a vaccine: tetanus, measles and tuberculosis. Ask a health worker about available vaccinations and malaria prophylaxis.

To prevent a person from getting pneumonia

- wash your hands after taking care of or contact with a sick person. Use soap or alternatively use ash.
- pregnant women and children should reduce contact with people with fever because they are very sensitive to getting ill.
- people who have a fever should cough into a tissue and always wash their hands carefully afterwards to prevent infectious particles from spreading to others. If no tissues are available, cough into your own sleeve or shirt rather than into your hand, because illness is spread much easier by the hands.

Malaria is caused by a mosquito bite, so it is important to keep mosquitoes away.

To prevent a person from getting malaria

- Always sleep under a bed net, preferably an insecticide-treated bed net; this is especially important for pregnant women and children younger than 5 years. The net prevents the mosquitoes from biting and also kills the mosquitoes if it is treated with insecticide (See 'Technique: Hanging up a bed net' p. x).
Long-lasting insecticide-treated nets remain effective for 3 to 5 years.
If there are not enough nets available, priority should be given to pregnant women and children under 5 years, and the bed can be shared under the same bed net.
Be careful not to touch the net while sleeping because mosquitoes can reach your skin and bite or the net can come loose.
- Avoid or drain stagnant water in unused ditches and water holes or other places, because mosquitoes need water to breed. Maintain a clean environment around your home. Dispose waste that can hold water.
- Wear long-sleeved clothes and cover your feet, as mosquitoes normally bite closer to the ground
- Stay inside the house after sunset because the mosquito that causes malaria is most active between sunset and sunrise

- If you keep cattle, keep them outside the house, as animals inside the house increase the risk of getting malaria.

Technique: Hanging up a bed net

Check the instructions of your bed net for specific points of attention for certain types of bed nets. General recommendations on how to hang up a bed net are given below.

1. Attach four screw-in hooks to the ceiling. Alternatively, you can use nails, cord or iron wire.
2. Unpack the bed net and be careful not to make any holes, cuts or tears in the net allowing mosquitoes to get through.
3. Hang up the bed net by tying the strings attached to the bed net to the hooks in the ceiling.
4. Tuck the loose ends of the bed net under the mattress or mat when you go to sleep to prevent mosquitoes from flying up under the bed net.
5. During the day, flip up the net so it cannot get damaged.

Caution

Sew up every small hole in your net before it becomes large and hard to manage, as mosquitoes can enter and bite.

Fits

An ill person has a fit if she suddenly shakes uncontrollably. It is different to normal shivering and trembling. It may manifest all limbs or just a single limb. The person having a fit may also urinate or defecate without control. A fit can be caused by a high fever, malaria, epilepsy, alcoholism or drugs. Epilepsy is a common illness caused by a problem in the brain.

An ill person has a fit if she suddenly shakes uncontrollably.

What do you do?

1. Remove objects that could hurt the person or move her to a safe place.
2. If possible, put during the fit something soft under her head if the ill person lies on the ground.
3. Make sure she can breathe freely by loosening tight clothing around her neck, such as a collar or tie.
4. When the fit stops, place her in the recovery position (see 'Technique: Recovery position' p. x). This will keep her breathing passage open. It will also prevent vomit from entering her lungs (see chapter 'Unconsciousness' p. x).
5. Stay and talk calmly with her until she feels better.
6. If the fit was caused by a high fever, give first aid for fever (see chapter 'Fever' p. x).

Caution

DO NOT try to hold the ill person down or put anything in her mouth:

- an ill person cannot swallow her own tongue during a fit;
- an ill person might bite her own tongue but this normally heals in a few days;
- an object or a hand placed in the mouth of someone having a fit is dangerous for the ill person and yourself.

When to seek medical help

A fit can be a sign of a serious illness. Any person with fits needs medical attention. Medical attention is especially important if:

- it is the ill person's first fit;
- the fit lasts longer than five minutes
- there is more than one fit and the ill person does not wake up in between;
- there is a high fever;
- the ill person has hurt himself.

Prevention of fits

Fits can be caused by high fever, malaria, epilepsy, head injury, alcoholism or medication. See prevention 'Fever' p. x, prevention 'Injury to head, neck or back' p. x and prevention 'Poisoning' p. x.

To prevent fits due to high fever

- Take measures to control the fever. See first aid for 'Fever' p. x
- People known to have epilepsy attacks should avoid flickering lights.

Diarrhoea

Diarrhoea is usually caused by an infection. A person can catch this infection by:

- not washing his hands;
- touching faeces;
- eating unsafe food, such as fish that was caught in polluted waters;
- drinking bad water;
- preparing food with bad water;
- food that has not been kept cold or has gone bad.

Diarrhoea causes dehydration as too much water and nutrition leaves the body. If an ill person does not receive help, he can die. Babies and children are most at risk.

What do you do?

1. Wash your hands before and after taking care of an ill person. You could pass on a disease to him and also catch his infection. Use soap to wash your hands or alternatively you can also use ash.
2. Prevent dehydration: at the first sign of diarrhoea, give the ill person plenty to drink.
 - There are special rehydration drinks that you can buy in sachets from the pharmacy.
 - Alternatively you can also prepare a rehydration drink yourself:
 - mix two fistfuls of maize flour (60g) with 1l of water;
 - add two pinches of salt and mix it well.
 - Stir continuously until it boils. Add a bit of water if the solution is too thick to drink.

If you cannot buy or prepare the rehydration drinks, then give clean drinking water as the main drink.

3. Each time an ill person passes diarrhoea, he must drink to replace what he has lost.
 - For children under 2 years old: between a quarter and half a large cup of fluid (50-100 ml).
 - For children from 2 to 10 years old: between half and a full large cup (100-200 ml).
 - For older children and adults: at least 1 large cup (200 ml).
4. If the ill person vomits, wait for 5-10 minutes before you give another drink, then use a spoon to give the drink more slowly.
5. Children should eat as normally as possible:
 - Breast-fed babies: continue to breast-feed but more frequently than usual.
 - Bottle-fed babies: continue with normal feeds and give extra rehydration drinks.
 - Older children and adults: eat as soon as they feel like it.

Caution

- When mixing the rehydration drink or baby formula, make sure you use clean drinking water or boiled and cooled water.
- Do not store unused drinks but throw them away.
- An ill person with diarrhoea does not normally need antibiotics, unless a qualified health worker has told you so.

6. Wash your hands after taking care of an ill person. Use soap to wash your hands or alternatively you can also use ash.
7. Try to obtain zinc tablets. This will help to fight the diarrhoea.
8. If the person also has fever, see chapter 'Fever' p. x.

When to seek medical help

Persons with diarrhoea may dehydrate. If an ill person does not receive adequate help, he can die.

Seek medical help if the ill person becomes more ill or if you see any of the following signs:

- very bad diarrhoea, blood in the diarrhoea;
- great sleepiness, difficulty in waking up, confusion;
- vomiting everything;
- the ill person urinates less and the colour of the urine darkens, sunken eyes, a child cries without tears, mouth is dry;
- the ill person is not drinking;
- fits;
- breathing seems wrong;
- the diarrhoea is not getting better after 2 days.

If an ill person also has a fever (see chapter 'Fever' p. x).

If an ill person must travel for help, keep giving him sips of drink on the way there.

Prevention of diarrhoea

Diarrhoea can be caused and spread by spoiled food or water, but it can also be spread by hands or cooking or eating materials that have been in contact with faeces.

To prevent a person from getting diarrhea

- Wash your hands before preparing food, before eating and before and after taking care of a sick person. Use soap or ash.
- Do the same after using the toilet or latrine or after changing a baby or after handling children's faeces.
- Always throw away stools in a toilet or latrine. Also throw away the water used for washing children after defecation. Keep toilet areas away from water sources or water storage places.
- Always wash utensils that have been in contact with raw meat. Also wash your hands after touching raw meat. Use soap or ash.
- Ensure that your food is completely cooked, especially when you prepare meat or eggs. This will kill germs that can be present in the food.
- Store leftovers carefully: cover it and keep it cool, preferably in a fridge. Alternatively, store it in a cool and dry place where there is no waste. Avoid food that looks spoiled or smells bad.
- Peel or wash raw fruit or vegetables before eating. Do not eat raw fruit or vegetables that have been partially eaten by animals, because they can transmit disease.
- Always clean cooking and eating materials immediately after eating and let them dry on a rack. Keep your household clean at all times.
- Use clean pots with a narrow mouth and a lid at the top or a clean jerry can for storage of water. Jerry cans that contained petrol, paraffin or chemical should not be used. Always close the lid after filling the water storage container.
If you need water from the storage container, pour water into a second pot or glass, instead of taking it directly from the storage container.
If available to you, use containers with a tap at the bottom, so that water can be taken by tapping. This prevents recontamination of the water at the moment of taking water.
- Always drink clean water from a clean glass or container and use clean water to prepare food. Use water from a protected source like a piped supply, a borehole, a protected well or spring or rain water collection, but be aware that this can still be unsafe. Do not use water from shallow wells or other open sources that are open to contamination by animals, humans or waste.

- Always disinfect water using one of the following methods:
 - boiling: the water should bubble for at least 1 minute
 - ceramic filtration
 - using a product like chlorine or a flocculant/disinfectant powder
 - solar disinfection(See 'Technique: How to prepare clean water using solar disinfection' p. x).
- Water that is too turbid should first be filtered by pouring it through a clean cloth
- Avoid eating food if you are not sure whether it has been safely prepared.

Technique: How to prepare clean water using solar disinfection
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The UV-A rays in sunlight can be used to kill the germs in water.

1. Use plastic bottles from commercial water or soft drink or other bottles that carry the PET (polyethylene terephthalate) label. PET bottles are light, do not break and are harmless. Bottles should be transparent, without scratches on the surface. PET bottles often have a bluish tinge. Glass bottles can also be used, but these break more easily, are heavier and cost more.

The following bottles should NOT be used:

- Bottles that contained chemicals, because solar disinfection only kills germs.
- Bottles that contained detergents, shampoo or cooking oil, because they are usually made of PVC, which can be harmful to health after being heated. PVC bottles carry the triangle symbol with the number 3 in it.
- Bottles that are larger than 3 litres, because the sun's rays will not be able to penetrate far enough.

2. Wash out the bottles with soap and water.

3. Fill the plastic bottle with water that needs to be disinfected and close them tightly. Water that has been polluted with chemicals cannot be used. Water that contains too much sediment should first be filtered by pouring it through a clean cloth.

4. Lay the bottles on a clean surface in the sun for a period of at least 6 hours, preferably in a place where no shadows will fall. If possible, lay them on a reflective surface and shield them from cooling by the wind.

If it is cloudy, place the bottles in the sun for 2 days; if it is raining the method cannot be applied, because there will not be enough sun.

5. Keep the treated water in the bottle and drink directly from the bottle, or pour the water into a cup or glass immediately before drinking.

6. Handle the bottles carefully to prevent them from being scratched and replace old bottles (after about 6 to 12 months of daily use) and bottles that are no longer transparent.

Rash

A child with a fever and a rash may have measles if it goes together with any of the following signs: cough, runny nose or red eyes.

A rash can be difficult to see on dark skin: look for roughness on the skin.

What do you do?

1. Wash your hands before taking care of an ill person. Use soap to wash your hands or alternatively you can also use ash.
2. A child with a fever and rash should be kept away from other children, especially babies.
3. If the child lives in a malaria region, the child should be treated for measles and malaria. Give first aid for fever (see chapter 'Fever' p. x).
4. Wash your hands after taking care of an ill person. Use soap to wash your hands or alternatively you can also use ash.

Caution

A child with a fever and rash should be kept away from other children, especially babies.

When to seek medical help

Measles can cause death and can cause other infections. Sometimes measles can lead to complications, such as: malnutrition, blindness, deafness, lung disease, brain damage.

Seek medical help if you see any of the following signs:

- the child is not drinking;
- great sleepiness, the child is difficult to wake up;
- vomiting everything he takes in, diarrhoea, dehydration;
- fast breathing;
- fits;
- the child cannot bear light;
- earache or pus coming from the ear;
- eye infection;
- sores or open lesions in the mouth;
- spontaneous bleeding or small spots of blood leakage in the skin.

If an ill person must travel for help, keep giving him sips of water or liquid on the way there.

Prevention of rash caused by measles

A child with a rash may have measles, if he/she also has a fever in combination with a cough, runny nose or red eyes.

To prevent a child from getting measles

- Contact a health worker to ask about the measles vaccination.
- Keep children with measles away from other children for at least 5 days after the rash has disappeared to prevent them from getting ill too.
- People who have already had measles and vaccinated children are extremely unlikely to get measles.

Injuries

Severe bleeding

A person who has an open wound which is bleeding severely is in a life-threatening situation and immediate help is needed. The blood spurts or continues to flow from the wound.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. Check if there are no objects stuck in the wound. If there is an object in the wound do not remove it (see chapter 'Wounds with bullets or objects in a cut' p. x).
3. If the injured person is conscious, ask him to press on the wound himself.
4. Help the person to lie down and comfort him.
5. Try not to touch the person's blood. Put on rubber gloves if available. You can also use a clean plastic bag. Use a clean cloth to press on the wound.
6. Press on the wound with both hands. If the wound keeps bleeding, press harder on the wound. Keep pressing on the wound until help arrives.
7. You can also wrap a bandage around the wound to slow down the bleeding. If you do not have a bandage, you can also use clean clothing and tape for this.
8. Make sure the bandage is firm enough so it stops the bleeding but doesn't cut off all the blood flow. If the part of the body below the bandage changes colour or is swelling or the injured person says he is losing any feeling there, loosen the bandage a little but do not remove it. If the blood flow to a limb is stopped an injured person can lose his limb. If the bandage becomes soaked in blood, do not remove it. Add another one on top.
9. Keep the injured person warm by taking off wet clothing, covering him with a blanket or other covering, but do not overheat the injured person. Keeping the person warm is important to delay the onset of shock.
10. Arrange urgent transport to medical care yourself if you are alone.
11. Stay with the person until medical help is available. Once actions to obtain help have been made, keep checking that the person is conscious and breathing properly.
12. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.

Bleeding can also occur inside the body. This can happen after a road accident or a fall from a great height. Although the blood loss is unseen, this is a life threatening situation.

Suspect bleeding inside the body if the injured person:

- is losing blood from body openings;
- is breathing rapidly;
- has a cold and clammy skin that is pale or turns blue;
- is behaving in an irritated or unusual way;
- becomes sleepy or falls unconscious.

Keep the injured person warm and seek emergency medical help immediately.

Caution

- Do not raise the injured persons legs. The effect is very limited and might even cause harm.
- Do not try to stop the blood flow in a limb with a tourniquet or very tight bandages. If the blood flow to a limb is stopped, the limb can be lost.

Prevention of unintentional injuries

Severe bleeding or cuts and grazes can be the consequence of an accident with sharp objects or power tools, but also the result of a road traffic injury, a fall or sports injuries. For the prevention of road traffic injuries, see prevention of 'Injury to head, neck or back' p. x; for information on falls prevention, see prevention of 'Broken or dislocated limbs' p. x; and for recommendations on sports injuries prevention, see prevention of 'Injury to muscles or joints' p. x. Also see prevention of 'Eye injury' p. x for specific preventive messages concerning eye injury with an object in the eye.

Unintentional injuries can also be the consequence of gun shots. Firearms kill and keeping guns at home is dangerous. The acquisition of guns should be legitimate according to the local laws.

To prevent yourself or others from getting cuts or grazes

- Do not clean up broken glass or pottery with your bare hands. Use gloves or kitchen utensils.
- Wear gloves if you touch wooden materials that can splinter.
- If you go fishing, be careful when handling and throwing the fishing line, because the fish hook is very sharp and you may injure yourself or the people around you.
- Wear suitable protective clothing, such as long sleeves, gloves, glasses, a helmet and boots, when using sharp tools, such as machetes, knives or other agricultural tools, or doing manual work. Hold a sharp object away from your body while using it. When using a knife, always cut away from your body.
- Pass scissors or knives to other people handle-end first.
- Always read instructions and know how to use sharp tools and power tools properly. Pay close attention when using them. Shut the power off and use safety locks when you are not using the tools.
- Store sharp objects and working tools out of reach of children, in a locked cupboard or box. However, keep things that you need frequently within easy reach, so that you do not hurt yourself when taking them out.

To prevent bullet wounds

- Store handguns or other firearms in a locked cupboard or box, when not carrying or using them, so that they cannot be accessed by children, or people who would use them improperly. Be sure that children do not know where you have stored them.

Store the weapons unloaded, with the safety catch on and store ammunition separately, in a cool dry place away from heat and fire.

- When carrying a gun, always keep it pointed in a safe direction. Always keep it unloaded and keep your finger off the trigger until ready to use. If you want to shoot, be sure to know what is beyond your target.
- Do not check to see if a gun is empty by firing it.
- Firearms should not be used as a warning device. If you do so, be aware that they can kill.

Wounds with bullets or objects in a cut

Wounds with bullets, knives, arrows or pieces of glass can lead to severe bleeding and infection. Injuries to structures under the skin may cause loss of feeling or problems to move the body part. You should not try to remove any object because this will usually cause more bleeding and harm.

Even if you cannot see an object, there may be something stuck in the wound if:

- the injured person feels pain in a specific area;
- the injured person has a painful lump;
- the injured person has the feeling that something is in the wound;
- there is a discoloured area.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. Try not to touch the person's blood. Put on rubber gloves if available. You can also use a clean plastic bag.
3. If there is an object stuck in the wound, do not remove it because this can cause further damage or bleeding. Check if the object caused an additional exit wound if it passed through. Try to stop or slow down the bleeding. Be careful not to push the object deeper (see chapter 'Severe bleeding' p. x).
4. Use sterile gauze to cover the wound if available, or use a clean dry cloth.
5. Try to stop the protruding object from moving with bulky material and bandages. Build up padding around the object until you can bandage over it without pressing down.
6. Bandage the material above and below the object.
7. Take off jewels or anything else in the area of the wound that may cut off blood flow because of swelling.
8. Arrange urgent transport to medical care yourself if you are alone.
9. Once actions to obtain help have been made, stay with the injured person until medical help is available.
10. Keep checking that the injured person is conscious and breathing properly.
11. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you

Prevention of wounds with bullets or objects in a cut

See prevention of 'Unintentional injuries' p. x.

Snake, scorpion or spider bite or sting

The effects of a bite or sting are different according to the type of venomous animal.

Depending on the species there can be:

- bleeding, swelling, bruising;
- numbness, weakness, confusion, affected vision;
- heart arrest or difficulty breathing.

What do you do?

What do you do for a [snake bite](#)?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. If safe to do so, check what type of animal it is, but do not try to catch it. If possible write down the features of the snake.
3. Watch the injured person for a change in his condition. Evaluating if a snake is poisonous or not is difficult. It is best to assume that the snake is poisonous.
4. Help the injured person to lie down and tell her not to move. Offer comfort and keep her calm. This will slow down the venom.
5. Try not to touch the person's blood. Put on rubber gloves if available. You can also use a clean plastic bag.
6. Take off any rings, watches or tight clothing that may cut off blood flow because of swelling. Be careful not to move the limb.
7. If venom gets in the eyes, rinse them for 15 to 20 minutes with water, from the nose outwards.
8. If the bite is in the leg: immobilise the leg by bandaging it to the other leg.
 - Gently bring the good leg to the bitten leg.
 - Use a stick to splint the limb and bandage it in place.
 - If the bite is on the arms, tell the injured person to immobilise her own arm by holding it close to her body until she obtains medical care.
9. Arrange urgent transport to medical care yourself if you are alone.
10. Once actions to obtain help have been made, stay with the injured person until medical help is available.
11. Keep checking that the injured person is conscious and breathing properly.
12. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.

Caution

- Do not try to catch the snake.
- Do not try to suck or cut the venom out or do not rub herbs on as this will not help and can harm the person more.
- Tell the injured person not to move and to keep his limb very still. This will slow down the venom.

What do you do for a [spider bite or scorpion sting](#)?

1. Put on rubber gloves if available. You can also use a clean plastic bag.
2. Wash or wipe away any venom.
3. Use ice, if you have it, to cool the bite or sting:
 - Wrap the ice in a cloth or a towel so it does not touch the skin directly.
 - If you do not have ice, use cold water.
 - Do not cool for more than 20 minutes at a time.
4. Find medical help if the pain does not decrease.

Prevention of snake or spider bites and scorpion stings

In general snakes, scorpions or spiders do not seek contact with humans and will simply leave if they have the chance. When someone comes into contact with them, or disturbs them, they feel threatened and bite to defend themselves.

To prevent getting a bite inside the house

- All clothing, especially towels and bed sheets, should be carefully checked for scorpions and spiders and shoes should be shaken out before use.
- Sleeping under a bed net, that is properly hung and tucked under the mattress, offers protection against the bites of snakes, scorpions or spiders while asleep, (see 'Technique: Hanging up a bed net' p. x). Wherever possible, sleep above ground level.
- Maintain a clean domestic environment and seal holes and cracks in walls to reduce the number of hiding places for snakes, scorpions or spiders.
- Store food in sealed containers to keep away small animals (mice, rats, chickens) , as they are food for snakes and attract them.

To prevent getting a bite outside the house

- Keep your environment clean and the grass short around your house.
- Avoid places where snakes may live, for example tall grass or brush, rocky areas, fallen logs, swamps, marshes, and deep holes in the ground. Watch where you sit when outdoors. Do not put your hands into areas where snakes, spiders or scorpions may be hiding.
- When walking through tall grass or weeds, wear loose, long trousers and high, thick leather or rubber boots. Poke at the ground in front of you with a long stick to scare away snakes.
- Shine a light on your path when walking outside at night.
- Wear working gloves when selecting firewood, gardening, harvesting or working in an area where snakes, spiders or scorpions are likely to live.
- If a venomous spider lands on you, flick the spider off with a finger, rather than squishing it against the skin.
- Never agitate a snake if it comes nearby. First keep very still and then move slowly away.
- Never handle a snake, even if you think it is dead, as recently killed snakes may still bite by reflex.
- Never intentionally run over a snake on the road as it may become agitated and attack pedestrians. Also never ride over a snake as it can wrap around the undercarriage of your car and come home with you.

Burns

Burns can be a serious threat if they are not managed properly.

- With superficial burns the skin is red, slightly swollen and painful.
- If the burn is deeper you will also see blisters. These burns are extremely painful.
- If the deepest layer of the skin is burned there is usually no pain in the wound itself, because the nerves in this area have also been destroyed. The burn can look black, parchment-like or white and is dry. However the skin around the wound, which is often less deeply burned, is painful.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. If clothing is on fire, you can douse it with water, wrap the injured person in a heavy blanket or make the injured person roll on the ground. Stop the injured person from running around.
3. Use clean water to cool the burn, if you can, otherwise any water. Pour water on the burn for 15-20 minutes, or until it stops hurting. Cooling prevents a burn from going deeper by taking heat away from the skin and reduces pain.

Caution

An injured person can become hypothermic if he has large burns and needs to be kept warm:

- Try not to use very cold water for cooling the burn.
- Protect the injured person from the wind and wrap him in blankets.

4. Put on rubber gloves. You can also use a clean plastic bag.
5. Remove any clothing and jewellery that is not stuck to the skin.
6. You can put liquid honey on the burn. This prevents infection and helps the wound to heal. Do not use warm or hot honey. Alternatively you can also use aloe vera.
7. Dress the burn with a sterile wet wound dressing. Therefore, take the wound dressing preferably with sterile tweezers. Alternatively, you can use clean tweezers or your fingers when you only touch the wound dressing at the edges. Avoid dressings that may stick to the burn.
8. Bandage the dressing to the wound.

Caution

Leave blisters intact to prevent infection.

9. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.
10. Change dressings once a day.
 - When you change the dressing, make sure the old one comes off without sticking to the wound and damaging it: soak it in drinkable water first.

Caution

- Do not use vaseline for burns. Vaseline is not sterile and can cause infection.
- Keep flies and other insects away from the wound to prevent infection.

When to seek medical help

Minor burns can be safely managed at home. Seek medical help straight away if:

- the injured person is under 5 years old or over 65 years old;
- the burn is on the face, ears, hands, feet, the sexual organs or joints;
- the burn circles the entire limb, body or neck;
- the burn is equal or larger than the injured persons hand size;
- the burn looks black, white, papery, hard and dry;
- the injured person has no sense of feeling in the wound itself;
- the burns were caused by electricity, chemicals or high pressure steam;
- the injured person has inhaled flames or heat, or breathed in a lot of smoke.
- clothing or jewellery is stuck to the skin.

The injured person should seek medical help if it is more than 10 years since his last tetanus injection or if there is any doubt about when the injured person last had a tetanus injection. It is very safe to get a tetanus injection.

The injured person should seek medical care if in the days after, the burn smells bad, is soaked with pus or if he gets a fever.

Prevention of burn injuries and fire

Burn injuries can be caused by cooking accidents, house fires, electrical faults, candles, incense and children accessing fire and heat sources. They can cause a lot of pain, scars, deformities or death. Burn injuries can be easily prevented by modifying the household environment.

To prevent burn injuries

- Teach children about household objects that can burn them and about the danger of fire.
- Never leave children alone near heat sources, hot water and open fires.
- Install guards around open fires, electric, gas or coal heaters to discourage children from standing too close. Designate a specific cooking area, for example by making a raised stove with mud barrier if you cook outside, and keep children out of the cooking areas, especially when cooking at floor level or outside over an open fire. Prevent them from climbing on top of a stove or grabbing hot items like irons and oven doors.
- Never leave food unattended on a stove
- Turn pot and pan handles toward the back of the stove when cooking so that children can't accidentally knock them over. Do not leave spoons or other utensils in pots while cooking.
- Avoid wearing loose clothing that could catch fire, and keep cooking areas free of flammable objects (such as potholders and towels).
- Keep hot drinks away from young children. Hot liquids should be placed far back on a counter or be stored in a vacuum flask.
- Set the temperature of your water heater between 49–54 °C (120-130°F) or less for a regulated bath-water temperature. Check the temperature of the water with your wrist or elbow, before putting children into a warm bath tub to wash them.
- Store all matches, lighters and flammable material, such as kerosene, safely and out of the reach of children.
- Be careful when handling chemical products, as contact with these products can result in burns. Always read the instructions and wear protective clothing such as gloves and safety glasses.

To prevent fire

- Never leave candles unattended; ensure they are in sturdy metal, glass or ceramic holders and are placed where they cannot easily be knocked down. Keep them away from flammable materials like curtains.
- Be careful handling paraffin stoves and lamps as they can easily be knocked over and ignite.
- Maintain a good pressure on a paraffin stove, so that the paraffin does not leak outside the stove.
- Never smoke in bed or leave burning cigarettes unattended. Do not empty smouldering ashes into a trash can, and keep ashtrays away from clothes.
- Pour water or sand on smouldering ashes after cooking.
- In case of fire you can use fire extinguishers, or alternatively sand buckets, to quickly extinguish the fire.
- Be aware of danger when burning bushes.
- Do not pour petrol or paraffin on top of wood, when making a fire.
- Remove electrical cords from floors and keep them out of reach. Be careful with wires that are exposed and electrical instruments near water. Exposed wires or bad connections can cause fire.

Injury to head, neck, or back

Injuries to head, neck, or back can be very serious and should always be managed with caution.

Suspect a serious head or back injury if the person:

- has had a hard blow through a road accident or from falling from a height greater than standing height;
- becomes sleepy or falls unconscious;
- does not remember exactly what just happened;
- has a terrible headache that does not go away;
- is feeling sick to her stomach or is vomiting;
- is behaving in an irritated or unusual way;
- has a fit;
- has serious wounds or injuries on his head;
- complains that she feels numbness or a tingling feeling;
- has serious injuries on the legs and does not complain about the pain;
- feels pain or tenderness in the neck or back.

It is hard to know in what way an injured person is injured if the person

- is agitated;
- is in great pain;
- is drunk;
- is a child;
- is older than 65 years.

Seek medical help if you feel unsure about the injury.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider.

Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.

2. If the injured person is unconscious (see chapter 'Fainting or unconsciousness' p. x), you should make sure that she is breathing freely. If the injured person is conscious, calm her and ask her not to move.

Caution

- Do not move the injured person unless she is in more danger if she stays there, or if medical help will not arrive at the scene of the accident.
- Raising the injured person's legs provides no benefit and can cause pain and further injury. Keep the person still.

3. To keep the head still, place your hands or tightly folded clothing on each side of the injured person's head.

• Only keep the head and neck still if the injured person will let you. If the injured person is upset or excited, do not force her to have her neck immobilised.

4. Keep the injured person warm but do not overheat her.

5. Arrange urgent transport to medical care yourself if you are alone.

6. Keep checking that the injured person is conscious and breathing properly.

7. Once actions to obtain help have been made, stay with the injured person until medical help is available.

Transportation

• If you have to move the injured person, hold her neck absolutely still. Do not twist the injured person's head, neck or body if you can avoid it. This is very important. See 'Technique: Moving an injured person' p. x.

• If you have to move the injured person, put a folded blanket or clothing under the injured person when laying her back down to make her more comfortable.

Prevention of injuries to head, neck or back

Injuries to head, neck or back are in many cases the result of road traffic accidents. However, sports accidents or accidental falls can also cause such injuries. For recommendations on falls prevention, see prevention of 'Broken or dislocated limbs' p. x.

To prevent road traffic injuries for *car drivers and passengers*

- Always wear a seat belt while driving. Use child seats for children younger than 10 years or according to local regulations. Make sure they are used properly and that children are correctly strapped in.
If no child seats are available, you can also use seat belts.
Never let children stand upright or lie on seats while the car is in motion.
- Whenever possible, place children in the back seats of the car.
- Do not drive the car after drinking alcohol or taking drugs. Do not ride with a drunken driver. Discourage people who are drunk from driving.
- Do not drive the car when you are feeling tired or sleepy. The following can stop you from dozing off: talking to a passenger, rolling the window down or stopping to take a break.
- Always pay attention to the road, do not reach for things or use your cell phone while driving.
- Do not speed, always leave enough space between vehicles and always check traffic when leaving a parking space or overtaking other vehicles.
- Pay attention to cyclists and motorcyclists.
- Regularly maintain your car.
- Avoid using unsafe public transport, such as an overcrowded bus, a vehicle in bad condition or a vehicle that is driven by somebody who is tired or drunk. Use a seatbelt if available.

To prevent road traffic injuries for *motorcyclists or cyclists*

- Always wear a helmet when riding a bicycle or motorcycle.
- Motorcyclists should wear appropriate clothing: a jacket, trousers of thick material, boots made of strong leather, eye protection and gloves.
- Do not ride a bike or motorcycle after drinking alcohol or taking drugs.
- Always pay attention to the road. Look around for potential hazards: obstacles, potholes, other road users who suddenly stop, start off or turn unexpectedly.
- If cycling or driving a motorcycle at night, use lights so that you can see where you are going.
- Make sure that you are visible at night by using lights and reflective materials, such as reflective armbands, belts or school bags, fluorescent clothing or light coloured clothing.
- Only turn if it is safe to do so. You can use hand signals to indicate your intention to turn: extension of the left arm straight out in the direction of the turn, when turning to left and extension of the right arm straight out in the direction of the turn, when turning right.
- Regularly maintain and check your motorcycle or bicycle. Check that the brakes are working properly.

To prevent road traffic injuries for *pedestrians*

- Never let children play in the road.
- Cross the road at the designated places if available.
- If the road has no pavement it is safer to walk on the side of the oncoming traffic.
- Always pay attention when crossing the road. Make eye contact with other road users.

Look left and right before crossing and do not run when crossing the road.

Do not allow children less than 10 years old to cross the road unsupervised.

- Do not let a drunken pedestrian walk alone on the road.
- Carry a torch to light the road when walking at night.

Broken or dislocated limbs

The response of an injured person to a broken bone can be very different. Some persons with a broken leg may still be able to walk with some pain. Another person may be unable to move. In some cases the broken or dislocated limb is an odd shape. If you are not sure, then it is safer to assume that a bone is broken or dislocated. Seek medical help.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. If the break is bleeding seriously, press down on the bleeding or put on a compression bandage (see chapter 'Severe bleeding' p. x).
3. If you suspect a broken leg, tell the injured person not to stand on it. Do not bandage the casualty if an ambulance is on its way.
4. If you suspect a broken arm, tell the injured person to immobilise his own arm by holding it close to his body until he obtains medical care. If the casualty cannot support an injured arm, turn up the lower end of the clothing and pin it above the arm to form a sling.
5. If the injured person has one broken leg and needs to be transported, keep the leg still by splinting it to the other leg:
 - carefully move the uninjured leg close to the injured leg;
 - use padding to fill in any hollow areas;
 - use bandaging or strips of cloth to attach the legs together. If both legs are broken: you need to use a splint, for example a stick.

Caution

- If a limb looks odd or dislocated, do not try to reset it. This may make the injury worse.
- Raising the injured person's leg provides no benefit and can cause pain and further injury. Keep the person still.

6. If you use a splint, check that it is not too tight. If the fingers or toes become cold, white or blue, loosen the splint.
7. Keep the injured person warm, but do not overheat him.
8. Arrange urgent transport to medical care yourself if you are alone.
9. Once actions to obtain help have been made, stay with the injured person until medical help is available.
10. Keep checking that the injured person is conscious and breathing properly.

Caution

It is important to seek medical care straight away, as treatment by bonesetters sometimes can go very wrong, and an injured person can lose his limb or can die of complications.

When to seek medical help

If you are in doubt as to the severity of the injury, assume that the limb is broken or dislocated and seek medical help.

Prevention of broken or dislocated limbs

Accidental falls, traffic accidents or sports accidents can all lead to broken or dislocated limbs. For the prevention of road traffic injuries, see prevention of 'Injury to head, neck or back' p. x and for recommendations on sports injuries prevention, see prevention of 'Injury to muscles or joints' p. x.

Children and the elderly are at increased risk of falling.

To prevent yourself or somebody else from falling

- Do not leave objects lying around on the floor and immediately clean up spilled liquids or food. Remove electrical cords from the ground and avoid loose carpets. Repair damaged carpets and uneven or cracked floors immediately.
- Pay attention when walking on wet floors or on slippery ground.
- Store things you need frequently within easy reach.
- Ensure good lighting.
- Be sure that stairs are safe, especially for the elderly who are at risk of falling: remove loose objects or carpets, if possible provide a handrail.
- To prevent children from falling down the stairs, you can use a stair gate or something to block entry at the top or bottom of the stairs. Do not let young children go up and down the stairs alone. Even a few steps can result in a fall.
- Do not let young children climb in trees.
- Ensure that children cannot fall from an open window or balcony. If possible, use window guards and balcony railings.
- You can use non-slip mats and arm grips in your shower or bathtub.
- Wear shoes that fit properly. Slippers, smooth soles and high heels can cause you to slip and fall.

Injury to muscles or joints

Sudden unexpected movements like a blow or a fall can cause injuries to muscles or joints.

What do you do?

- Use ice, if you have it, to cool the injury. Ice can reduce pain and improve the healing.
- Wrap the ice in a cloth or a towel so it does not touch the skin directly.
- If you do not have ice, use cold water.
- Do not cool for more than 20 minutes at a time.

Caution

- Do not massage the injury.
- Do not put heat on the injury.
- Do not let the injured person continue his activity.
- Avoid alcohol.

When to seek medical help

Many injuries to muscles or joints can be managed at home. But if you are not sure how severe the injury is, it is safer to seek medical help.

Seek medical help in case of:

- bad bruising and swelling;
- some loss of feeling;
- inability to move the limb;
- a very painful and tender joint swelling straight after injury.

Seek medical care in the days after if:

- The injured person has difficulty walking or making other movements.
- The pain or swelling gets worse.
- The injured person has a fever and a swollen joint that feels warm to the touch;

Prevention of injury to muscles or joints

Injuries to muscles or joints are often caused by sports accidents, accidental falls, road traffic injuries or making the wrong movements when lifting or carrying a heavy load. For recommendations on the prevention of road traffic accidents, see prevention of 'Injury to head, neck or back' p. x and for recommendations on falls prevention, see prevention of 'Broken or dislocated limbs' p. x.

To prevent injury to muscles or joints due to sports

- Warm up properly before you start doing sports by stretching your muscles and starting your activity gently. This would increase tissue temperature, which makes the muscle more flexible, resulting in fewer stretched muscle injuries.

A good warm-up should take about 20 minutes.

- Avoid sporting activities or exercises when you are tired. Take a break when you feel exhausted.
- Respect the rules of the game during team sports.
- Always wear shoes that support and protect your feet when doing sports or outdoor activities.
- Wear appropriate protective equipment, such as knee and elbow pads, if you engage in sports.
- Be careful when running or walking on uneven surfaces.

To prevent injury to muscles or joints due to lifting

- Reduce the load, if possible. Ask other people to help you carry a heavy load.
- At the start of the lift, adopt a posture that gives you maximum balance and reduces the chance of losing your balance when lifting.
- Kneel deep and keep your back straight when lifting a low-lying load.
Avoid bending forward without knee flexion when lifting a low-lying load.
- Avoid lateral flexion and extreme rotation of the upper part of the body while lifting.

Eye injury

The eye is a person's window to the world. Eye injuries should always be managed with great care.

What do you do?

For **an object** that is stuck in the injured person's eye:

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. Do not try to remove it but loosely cover the eye.
3. Keep the head as still as possible.
4. Cover the good eye as well and ask the injured person to keep it still, because both eyes move together.
5. Arrange urgent transport to medical care yourself if you are alone.

For **a speck** in the injured person's eye:

1. If there is a speck in the eye, get the injured person to sit.
2. Rinse the speck out of the eye from the nose outwards.
3. Use clean water or water that has been boiled and cooled. Water at room temperature is more comfortable than cold water. Warm water might burn the eye.
4. If this does not work, cover the eye and seek medical assistance.

For **a blow** to the eye:

1. Make a cold compress:
 - put ice in a plastic bag and wrap it in a cloth or
 - soak a piece of clean cloth in cold water and squeeze it out.
 - Make sure the eye is fully closed when applying the cold cloth.
2. Put this cold compress loosely on the eye as long as the person can tolerate it. Do not press hard against the eye. This helps with the pain and keeps down swelling.

For **harmful liquids** in the eye:

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. Rinse out the eye straight away with preferably clean water. Do this for 10 - 15 minutes, from the nose outwards so that none of the liquid runs out from one eye into the other.
3. Arrange urgent transport to medical care yourself if you are alone.

When to seek medical help

Eye injuries should always be managed with great care. Immediate medical help is needed for eye injuries if:

- a harmful liquid entered the eye;
- a speck cannot be removed or if an object (even very small) is stuck in the eye;
- the vision is affected.

If the condition of the eye gets worse in the days after, the injured person should seek medical help straight away. Signs to look for are:

- pain getting worse;
- vision that is getting worse;
- condition of the eye not getting better after 3 days.

Prevention of eye injury

Various different objects can unexpectedly fly into your eyes and cause injury. Prevention is the best way to protect your eyes from injury. Be sure to protect your eyes with appropriate protective eyewear.

To prevent eye injuries

- Wear safety glasses, goggles, or face shields when you hammer nails or metal and work with power tools to protect against flying fragments, dust particles and sparks.
Use chemical goggles to guard against exposure to splashing fertilisers, pesticides and chemicals.
If you are welding or near someone else who is welding, wear a mask or goggles designed for welding.
- Protective eyewear can prevent sports-related eye injuries. Wear proper safety goggles during sports that carry the risk of eye injuries such as racquet sports.
- If you go fishing, be careful when handling and throwing the fishing line, because the fish hook is very sharp and can easily become embedded in your eye.
- Do not let children throw stones and tell them to be careful of the eyes when playing with sticks.
- If you have lost one eye, always wear protection for the other eye, since you are at greater risk of eye injury due to a loss of vision.

Bite wounds

Any human or animal bite (e.g. dog, cat, monkey) that breaks the skin needs special care because it can cause infections.

What do you do?

1. Wash your hands before giving first aid. Use soap to wash your hands or alternatively you can also use ash. Put on rubber gloves if available. You can also use a clean plastic bag.
2. If the person is bleeding severely, try to stop the bleeding first (see chapter 'Severe Bleeding' p. x).
3. Rinse the wound under running, clean water until it is clean.
4. Cover the wound with sterile gauze or a clean dry cloth.
5. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.

When to seek medical help

Always seek medical help straight away for bite wounds because a person who has been bitten needs adequate medication to prevent infection. It is also important to be vaccinated for tetanus.

Prevention of dog bite wounds

Dogs can attack and bite when they feel threatened or when they are scared or ill. A dog bite can be inflicted by a stranger's dog, but also by an animal belonging to the victim's family. Many dog bite victims are children. A dog bite may cause a rabies infection.

To prevent a dog from biting you or another person

- Teach children not to threaten or scare dogs.
- Never leave children alone in the presence of dogs.
- Do not touch dogs that you do not know. Avoid dogs exhibiting unusual behaviour.
- Do not enter a compound where there is a guard dog that is not restrained.
- Do not touch dogs while they are eating, sleeping or playing.
- Avoid running in the presence of a stranger's dog.
- Stand still if you are attacked by a dog. Do not try to run away, but walk away slowly when the dog loses interest.
- Leave your dog alone when it is scared.
- Do not allow your dog to approach strangers without your supervision.

Nose bleed

The nose contains small blood vessels that bleed easily. Therefore, nosebleeds are common. Either by a blow to the nose, or as a result of sneezing or picking the nose. But they can also occur without any apparent cause.

What do you do?

1. Ask the injured person to pinch his nose with index finger and thumb. Tell the injured person to breathe through the mouth. If necessary, pinch the injured person's nose yourself. Try not to touch the injured person's blood. Use gloves or a plastic bag.
2. Pinch for 10-15 minutes.
3. Ask the injured person to lean forwards so that he does not swallow or breathe in blood. Swallowing blood can make the person feel sick.
4. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.

When to seek medical help

In a few cases a nose bleed can be serious and lead to death. You should seek medical help if:

- blood is still coming from the nose after 20 minutes;
- the nose bleed was caused by a hard punch on the nose; a fall; a road accident;
- blood spurts from the nose;
- the injured person becomes sleepy or falls unconscious.

Prevention of nose bleed

A nose bleed can be the result of trauma to the face, but can also occur spontaneously because of dryness inside the nose. Other causes can be a foreign object in the nose, infection, common colds, allergies, high blood pressure, high altitude, a dry environment, alcohol abuse, disease and the use of certain medication.

To prevent a nose bleed

- Do not pick your nose or blow your nose hard as this can result in a nose bleed.
- Prevent children from putting small objects in their nose. Children under the age of 3 are at the highest risk because they explore the environment by putting objects in their mouth or nose. Therefore, they should not have access to any object or food particle smaller than 3 cm.

Cuts and grazes

Even if an injured person just has a small cut or graze you still need to take care that the wound does not become infected.

What do you do?

1. Wash your hands before giving first aid. Use soap to wash your hands or alternatively you can also use ash. Put on rubber gloves if available. You can also use a clean plastic bag.
2. Try to stop or slow down the bleeding: press on the wound with a clean cloth or bandage.
3. Rinse out the wound with clean water.
 - You can also use boiled and cooled water.
4. Pour water on the wound until you cannot see any foreign material left in the wound. Foreign material means dirt or anything else that comes from outside the injured person's body.

Caution

Do not try to clean inside the wound by rubbing it. This may cause further damage to the wound.

5. If you have a piece of sterile gauze, then cover the wound with it.
6. Use a sterile plaster to close a clean cut. If no plaster is available, use a bandage or a clean cloth.
7. Bandage the dressing to the wound. Do not apply the bandage too firmly. If the part of the body below the bandage changes colour or is swelling, loosen the bandage a little bit.
8. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.
9. Tell the injured person or the person caring for him to keep the wound dry. Do not allow flies to touch the wound. Keeping the wound clean will help, as a bad smell attracts flies.
10. Every 2 or 3 days rinse out the wound with clean water and change the dressing. If the wound is infected then clean this every day.

Caution

- Even small wounds need attention to prevent infection.
- If a dressing needs to be changed, do not tear the old one off as this can damage the healing wound. Instead, put enough water on the old dressing to take it off easily.
- It is not good to try to close a dirty wound.

When to seek medical help

Most cuts and grazes can be easily managed at home. You should seek medical help if:

- you cannot stop the bleeding;
- an object is in the wound;
- the wound has an irregular shape, is gaping open or is bigger than half the width of the injured person's hand;
- the injured person is losing feeling or has problems moving the body part;
- the wound is on the face, is on or near eyes, or in the area of the sex organs;
- the wound has dirt in it and cannot be cleaned properly;
- the wound has faeces or urine in it;
- the wound was caused by a bite;
- the injured person has diabetes or an immune disease;
- the injured person is 65 years old or older;
- it is more than 10 years since the injured person last had a tetanus injection or if there is any doubt about when the injured person last had a tetanus injection. Even small wounds can cause tetanus and it is very safe to get a tetanus injection.

It is best that wounds are managed within 6 hours. Do not delay seeking medical help.

Tell people to **watch out for infection** in the days after and get medical help if there is any sign of infection, such as:

- the pain is getting worse;
- the injured person has a fever or feels unwell;
- swollen, hot, red skin around the wound.

It is normal to have some light wound response. Get medical help if the seepage increases or is associated with signs of infection.

Prevention of cuts and grazes

See prevention of 'Unintentional injuries' p. x.

Bee or wasp stings

A bee or wasp sting causes a red, swollen lump that can be painful and itchy. Some people can have an allergic reaction which can be life-threatening.

What do you do?

1. Removing the sting as quick as possible can help keep the bite smaller.
2. Use your fingers or whatever you have at hand to remove the sting.
3. Wash the bite with water.
4. Use ice, if you have it, to cool the bite:
 - Wrap the ice in a cloth or a towel so it does not touch the skin directly.
 - If you do not have ice, use cold water.
 - Do not cool for more than 20 minutes at a time.

Caution

Do not scratch the bite: this can cause infections, especially when the nails are dirty.

When to seek medical help

Some people are allergic to bee or wasp stings. This is a life threatening situation. Seek emergency medical help if the injured person suffers the following symptoms right after being stung:

- a rapid pulse, dizziness or feeling faint;
- swelling or itching anywhere else on the body;
- difficulty breathing;
- a headache;
- difficulty swallowing, or swelling to the face or mouth.
- vomiting.

Seek medical attention if the sting is very painful.

Prevention of bee or wasp stings

Bees or wasps are attracted to flowers, food, bright colours and odours.

To prevent a bee or a wasp sting

- Keep away from flowering plants, ripe fruit bushes and trees, rotten fruit, compost and food waste. If this is not possible, wear long trousers and long-sleeved clothes and cover your hands and face as much as possible.
- Cover your drinks and check drinks and food for bees or wasps before eating or drinking.
- Do not leave food waste uncovered outside.
- Wipe off food remains on clothes, hands and the face of children, as this may attract bees or wasps.
- Shake out shoes, socks and clothing before wearing as they might contain insects.
- Do not touch or disturb bee or wasp hives. If you want to harvest honey, protect yourself by wearing long trousers and long-sleeved clothes and cover your hands and face as much as possible.
- Remain calm if attacked by a bee or a wasp. Do not wave your hands at bees or wasps in an attempt to brush them away, since they react to movement.
- Run and find shelter if attacked by a swarm.

Poisoning

Poisoning

Poisoning can occur through several routes. Poisoning from swallowing is often caused by household products, overdose of medication or toxic plants. The effects of poisoning depend on what poison has been swallowed.

Signs of poisoning that can occur, include:

- nausea, vomiting, pain;
- difficulty breathing, seizures, confusion;
- odd skin colour.

What do you do?

1. Ask a bystander to seek help or to arrange for bringing the injured person to a medical care provider. Tell him to come back to you to confirm if help has been secured. The injured person urgently needs help. Shout or call for help if you are alone but do not leave the injured person.
2. Place the person on his left side. This will reduce absorption of the poison in the body.
3. Find out what the poisoned person has swallowed and when it happened.
4. Arrange urgent transport to medical care yourself if you are alone.
5. If this is safe, show the container of the poison to the doctor or write down the label.

Caution

- Avoid contact with any poisonous material on yourself.
 - Do not force a poisoned person to vomit unless a nurse or doctor has told you to.
 - Do not give milk or water to a poisoned person unless a nurse or doctor has told you to.
- This only helps for some poisons, and may cause harm in other cases.

Prevention of poisoning

Most unintentional poisonings occur at home when parents or caregivers are not paying attention to children. The most dangerous potential poisons are medicines, cleaning products, pesticides and paraffin. Poisoning incidents can be prevented by keeping potentially dangerous substances out of reach. To prevent poisoning from spoiled food, see prevention 'Diarrhoea', p. x for recommendations about the safe handling of food.

To prevent poisoning incidents

- Teach children about the dangers of substances that contain poison.
- Store all medicines in their original packaging in a safe place, such as a locked cupboard, out of the sight and reach of children.
Take old medicines that have expired to a healthcare facility.
- Do not put your medication on the counter or table where children can reach them; put them back in the usual storage place immediately after use.
- Store household cleaning products, pesticides, fertilisers and paraffin well out of reach, and preferably in child-resistant containers.
- Label poison containers clearly.
- Avoid taking medicine in front of children because they often copy adults. Never tell children that medicines are 'sweets'.
- Take or give medicines in a well-lit environment so that you know you have the correct amount of the right medicine.
- Never use food containers or old soda bottles to store poisonous substances.
- Only re-use containers for domestic use if they are clean, as containers may have contained pesticides.
- Never put insecticide powders or rat poison on the floors of your home; choose a place that is not easily accessible to children. Mouse traps, spring traps or glue traps are generally safe.
- Identify poisonous plants in and around your house and place them out of reach of children or remove them. Never eat fruits, berries, mushrooms or plants in the wild unless you are sure that they are safe to eat, because they can be poisonous.
- Do not handle chemicals used on the farm with your bare hands.

Emergency childbirth

Emergency childbirth

In the last part of pregnancy a woman can go in labour at any time. The following signs mean that labour has started and that the baby is coming:

- painful contractions and any of the following;
- the waters break;
- sticky discharge;
- abdominal discomfort;
- local back pains.

Labour usually is a lengthy process so in many cases there is time to get the mother to medical aid before the baby arrives.

What do you do?

What do you do when **labour starts**?

1. If there is medical care in your area, it is best to arrange for bringing the woman there. If not, send someone for the help of a skilled attendant and prepare for the delivery. If available to you, take your delivery kit. This kit contains soap, gloves, materials for cutting the cord and other objects to guarantee a clean delivery and to prevent infections of the baby after birth.
2. Offer support and personal care:
 - Encourage the woman's birth companion(s) to be involved.
 - Praise and encourage her.
 - Protect and respect her privacy.
 - Massaging the woman's back may help with the pain.
3. Encourage the woman to move around and find the most comfortable positions.
4. Encourage the woman to urinate often. This will help make more space for the baby.
5. Encourage the woman to drink during labour, even at the end. She can also eat a little to keep up her strength.
6. Encourage her to think about her breathing:
 - To breathe out slowly and loudly, and to relax with each breath.
 - Suggest breathing more slowly if the woman feels dizzy, unwell, or tingling in her face, hands or feet.
7. Seek medical help immediately:
 - if the baby presents with the buttocks or feet first, instead of the head first;
 - if there are no contractions 6 hours after the waters broke;
 - if contractions continue for more than 12 hours;
 - the woman is bleeding or has a fever.

Caution

- Do not leave the woman alone.
- Do not use any remedies or medications to speed up labour or to clear out the bowel unless a midwife or doctor has told you to.

What do you do when **the pushing stage** comes?

1. Help the woman into the most comfortable position. An upright position is best, but a lying position is the least challenging to assist with the delivery. If the woman lies on her back, it is best to put a small pillow under the right hip so that she lies to the side. The weight of the baby may press on important blood vessels.
2. Wash your hands before giving first aid. Use soap to wash your hands or alternatively you can also use ash. Put on rubber gloves if available. You can also use a clean plastic bag.
3. Women naturally feel the urge to push. If pushing is not working then the woman should change position or empty her bladder. Ask the woman not to push when the baby's head is being delivered.
4. Watch the baby come out while supporting the head and shoulders. Do not do anything to 'pull' the baby out.

Caution

Do not push on the woman's belly during labour or after delivery.

What do you do when **the baby is born**?

1. immediately place him on the mother's bare chest or abdomen so they have skin-to-skin contact.
2. Cut the baby's cord:
 - Use 2 long ties and a clean knife, scissors or razor blade. The material you use to cut the cord should be sterilised by placing it 10 minutes in boiling water or running it through a flame a few times.
 - Tie the first knot 2 cm (2 fingers) away from the child's abdomen.
 - Tie the second knot 5 cm (5 fingers) away from the abdomen.
 - Add another tie on the side of the baby, if the cord continues bleeding after cutting it.
 - Keep the cord dry and clean.

Do not put any substance on the baby's cord or stump. This could lead to infection.

3. Wipe the baby clean and dry him.
4. The mother and baby must be kept warm and close together. The baby can be dressed or wrapped.
5. The placenta or afterbirth will come on its own. When it is delivered, put it somewhere safe until it can be disposed of appropriately. Do not try to pull out the afterbirth by pulling on the cord. If the placenta rips, it may cause infection.
6. Wash your hands after giving first aid. Use soap to wash your hands or alternatively you can also use ash.
7. Encourage breast-feeding immediately after birth. Although there is no breast milk, the baby's sucking will encourage the milk to come. Breast-feeding helps the placenta to come out and prevents bleeding of the woman after delivery.
8. Encourage the woman to move around as soon as she feels able after the birth.
9. Do not leave the mother alone during the first 24 hours. The woman should always seek medical attention.

What do you do if **a baby is not breathing**?

1. If the baby is not breathing or is struggling to breathe, start resuscitation within 1 minute of birth.
 2. Move the baby to a clean, dry and warm surface.
 3. Tell the mother that the baby is having problems breathing and that you will help him to breathe.
 4. Keep the baby wrapped up warm.
 5. Start resuscitation as described in first aid for breathing arrest (see chapter 'No breathing' p. x).
 6. Stop resuscitation after 20 minutes if the baby is not breathing or gasping for air.
- Explain what has happened to the mother and offer your support.

What do you do if **the woman is bleeding** heavily after delivery?

1. Seek immediate medical help.
2. Massage the belly firmly below the navel.
3. Ask the woman to urinate, if possible.

These actions can help to slow down the bleeding.

When to seek medical help

Even though giving birth is a natural part of life, it can sometimes threaten the life of the mother or baby.

When to seek medical help for **the mother**?

The mother should always seek medical attention after delivery.

Go to the hospital or health centre **WITHOUT DELAY**, day or night, if the mother has any of the following danger signs:

- fever and weakness, unable to get out of bed;
- pain in the belly and/or bad smelling substance from the vagina;
- sudden bleeding or increasing loss of blood;
- fits;

- difficulty breathing, fast breathing or chest pain;
- the mother can feel her heart beating too hard or irregularly;
- terrible headaches and blurry sight;
- nausea, vomiting;
- faintness, dizziness.
- if the afterbirth is incomplete or has not been delivered 1 hour after the birth of the baby.

When to seek medical help for [the baby](#)?

A newborn baby should always get medical attention.

Seek medical help **WITHOUT DELAY**, day or night, if the baby:

- is very small;
- has difficulty breathing;
- has fits (see chapter 'Fits' p. x);
- has fever (see chapter 'Fever' p. x);
- feels cold;
- is bleeding from cord stump;
- is not able to breast-feed.

Transportation

If you must travel with the baby to get medical help:

- keep him warm against the skin of his mother or someone else;
- keep him covered with a blanket and his head covered with a cap;
- protect the baby from direct sunlight;
- encourage the mother to breast-feed during the journey. If the baby cannot breast-feed and the journey is longer than 3 hours, get the mother to squeeze breast milk into a cup and feed the baby by cup.

Promotion of safe pregnancy

A woman's health and behaviour in pregnancy affect her baby and it is of great importance that she is well informed. Therefore, the first contact with a health worker should be as early in pregnancy as possible.

To prevent complications during pregnancy or harmful situations for either mother or baby

- If possible, encourage pregnant women to go to the health centre at least 4 times during their pregnancy and ask a health worker about vaccinations, healthy diet, and which measures to take to prevent diseases that can endanger the health of the unborn child. Pregnant women should follow all the advices of the health care worker carefully.
- Pregnant women should also visit the health centre even if there are no problems during their pregnancy.
- If at any time you have any concerns about your health or that of your baby in between the 4 visits, go to the health centre immediately as early detection of a medical problem helps to control the problem better.
- If available, have a safe delivery kit close to hand and make sure that you have it with you when delivering. This kit contains soap, gloves, equipment for cutting the cord and other objects to guarantee a clean delivery and to prevent the baby getting an infection after birth.

Even if you have such a kit you still need to go to the health centre to check your health and that of your baby during pregnancy and delivery.

- Pregnant women should always sleep under a bed net, as malaria infection during pregnancy can be a serious threat to the baby's health. To prevent malaria, see prevention 'Fever' p. x.

Methodology

This publication is scientifically supported by evidence-based guidelines of the Centre of Expertise of Belgian Red Cross-Flanders:

- This practice guideline was developed according to AGREE II, a tool to develop evidence-based practice guidelines.
- We systematically searched for evidence in 9 bibliographic databases (Guidelines International Network, the WHO Library Database, African Index Medicus, Medline, Embase, Cochrane Library, DARE, BestBets and Central).
- We summarised the evidence transparently and we formulated draft recommendations based on the evidence.
- We assessed the risk of bias in the evidence using the GRADE approach.
- An expert panel consisting of 11 African experts assessed and validated the guidelines. The experts assigned grades of recommendation (weak or strong) for recommendations based on evidence using the GRADE approach. Where evidence was lacking good practice points were formulated.
- For topics following these criteria no evidence review was performed: interventions that are the responsibility of a medical doctor; interventions based on common sense or good practice points; interventions that do not take place in the acute phase; information based on physiology and anatomy; recommendations that require special equipment; interventions that are not feasible for extrapolation to basic first responders; interventions that are not relevant for the African context.
- 7 external peer reviewers reviewed the guidelines at the end of the guideline development process with final validation by the chair of the expert panel.

More information on the used methodology is provided at: www.afam.redcross.be

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